Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Currently Amended) An ink-jet recording head comprising at least one piezoelectric block having (a) an ink pressure chamber communicating with a nozzle for ejecting ink supplied from an ink supply, (b) a partition wall serving as a driving portion that includes a piezoelectric element and at least two electrodes for driving said piezoelectric element, (c) a pressure buffer chamber, and (d) two fixed walls,

F3 Cont'd

wherein said ink pressure chamber, said partition wall and said pressure buffer chamber are respectively arranged in sequence along a thickness direction of said piezoelectric block, ~~and~~

one of said fixed walls is disposed adjacent to said ink pressure chamber and another of said fixed walls is disposed adjacent to said pressure buffer chamber~~.~~, and

each of said fixed walls is more difficult to bend compared with said partition wall.

2. (Cancelled)

3. (Currently Amended) An ink-jet recording head comprising at least one piezoelectric block having (a) first and second ink pressure chambers, each pressure chamber communicating with a nozzle for ejecting ink supplied from an ink supply, (b) first and second partition walls, each partition wall serving as a driving portion for one of the two ink pressure chambers, each partition wall including a piezoelectric element and at least two electrodes for driving said piezoelectric element, (c) a pressure buffer chamber, and (d) first and second fixed walls,

wherein at least one of said electrodes is embedded in said partition wall for controlling, by bending of the embedded electrode, whether said partition wall bends toward a side of said ink pressure chamber, or bends toward a side of said pressure buffer chamber,

the first ink pressure chamber, the first partition wall, said pressure buffer chamber, the second partition wall and the second ink pressure chamber are arranged in sequence along a thickness direction of said piezoelectric block,

said first fixed wall disposed adjacent to said first ink pressure chamber and said second fixed wall disposed adjacent to said second ink pressure chamber,

the piezoelectric block is an integrally sintered one piece block structure, ~~and~~

surfaces of the two electrodes are oriented perpendicular to the thickness direction, the driving portion is polarized in the thickness direction and perpendicular to the surfaces of the electrodes~~.~~, and

each of said first and second fixed walls is more difficult to bend compared with each of said first and second partition walls.

4. (Currently Amended) An ink-jet recording head comprising:

at least one piezoelectric block (A) having (a) an ink pressure chamber (A) communicating with a nozzle (A) for ejecting ink supplied from an ink supply, (b) a partition wall (A) serving as a driving portion that includes a piezoelectric element (A) and at least two electrodes (A) for driving said piezoelectric element (A), (c) a pressure buffer chamber (A), and (d) two fixed walls (A); and

at least one piezoelectric block (B) having (a) first and second ink pressure chambers (B), each ink pressure chamber (B) communicating with a nozzle (B) for ejecting ink supplied from an ink supply, (b) first and second partition walls (B), each partition wall (B) serving as a driving portion for one of the two ink pressure chambers, each partition wall (B) including a piezoelectric element (B) and at least two electrodes (B) for driving said piezoelectric element (B), (c) a pressure buffer chamber (B), and (d) first and second fixed walls (B),

wherein said piezoelectric block (A) is configured such that said ink pressure chamber (A), said partition wall (A) and said pressure buffer chamber (A) are respectively arranged in sequence along a thickness direction,

one of said fixed walls (A) is disposed adjacent to said ink pressure chamber (A) and another of said fixed walls is disposed adjacent to said pressure buffer chamber (A),

said first ink pressure chamber (B), the first partition wall (B), said pressure buffer chamber (B), the second partition wall (B), and the second ink pressure chamber (B) are arranged in sequence along the thickness direction of said piezoelectric block (B), ~~and~~

said first fixed wall (B) disposed adjacent to said first ink pressure chamber (B) and said second fixed wall (B) disposed adjacent to said second ink pressure chamber (B)~~.~~, and

each of said fixed walls (A), (B) is more difficult to bend compared with each of said partition walls (A), (B).

5. (Previously Presented) The ink-jet recording head as set forth in claim 1, wherein said piezoelectric block is a block molding molded integrally by baking powder including a piezoelectric material.

6.-38. (Cancelled).

39. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein said piezoelectric block is a block molding molded integrally by baking powder including a piezoelectric material.

40. (Previously Presented) The ink-jet recording head as set forth in claim 4, wherein said piezoelectric blocks (A) and (B) are block moldings molded integrally by baking powder including a piezoelectric material.

41. (Previously Presented) The ink-jet recording head as set forth in claim 5, wherein said block molding is molded by baking a lamination obtained by laminating sheets made of the powder and a binder.

42. (Previously Presented) The ink-jet recording head as set forth in claim 39, wherein said block molding is molded by baking a lamination obtained by laminating sheets made of the powder and a binder.

43. (Previously Presented) The ink-jet recording head as set forth in claim 40, wherein said block molding is molded by baking a lamination obtained by laminating sheets made of the powder and a binder.

44. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein said piezoelectric block is repeatedly arranged in the thickness direction, or in a direction perpendicular to the thickness direction.

45. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein said piezoelectric block is repeatedly arranged in the thickness direction, and in a direction perpendicular to the thickness direction.

46. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein at least two piezoelectric blocks are integrated with each other by baking.

47. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein at least two piezoelectric blocks are welded to each other via an adhesive.

48. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein at least two piezoelectric blocks are arranged on a predetermined base member without being welded to each other.

F3 Cont'd

49. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein a piezoelectric block assembly composed of at least two piezoelectric blocks integrated with each other by baking is welded to another assembly composed of at least two piezoelectric blocks integrated with each other by baking or is welded to said piezoelectric block via an adhesive.

50. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein an assembly composed of at least two piezoelectric blocks integrated with each other by baking is arranged on a predetermined base member without being welded to another assembly composed of at least two piezoelectric blocks integrated with each other by baking or to said piezoelectric block.

51. (Previously Presented) The ink-jet recording head as set forth in claim 1, wherein a length of said fixed walls in the thickness direction is greater than that of said partition wall in the thickness direction.

52. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein a length of said fixed walls in the thickness direction is greater than that of said partition wall in the thickness direction.

53. (Previously Presented) The ink-jet recording head as set forth in claim 4, wherein a length of each of said fixed walls (A) and (B) in the thickness direction is greater than that of a respective partition wall (A) and (B) in the thickness direction.

54. (Previously Presented) The ink-jet recording head as set forth in claim 1, wherein each of said fixed walls includes a portion firmer than said partition wall.

55. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein each of said fixed walls includes a portion firmer than said partition wall.

56. (Previously Presented) The ink-jet recording head as set forth in claim 4, wherein each of said fixed walls (A) and (B) includes a portion firmer than a respective partition wall (A) and (B).

57. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein each of said fixed walls includes a hollow portion.

58. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein said pressure buffer chamber is closed on a side at which said nozzle communicating with said ink pressure chamber is open.

59. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein said pressure buffer chamber communicates with an air inlet/outlet path connected outside of said recording head.

60. (Previously Presented) The ink-jet recording head as set forth in claim 42, wherein each of said electrodes has a mesh-like structure.

61. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein a number of said electrodes is two.

62. (Previously Presented) The ink-jet recording head as set forth in claim 61, wherein one of said electrodes is exposed to one of said ink pressure chamber and said pressure buffer chamber.

63. (Previously Presented) The ink-jet recording head as set forth in claim 61, wherein one of said electrodes is exposed to said pressure buffer chamber.

64. (Cancelled)

65. (Previously Presented) The ink-jet recording head as set forth in claim 61, wherein both of said electrodes are embedded inside said partition wall.

66. (Previously Presented) The ink-jet recording head as set forth in claim 65, wherein one of said electrodes is disposed apart from said ink pressure chamber with a predetermined distance (L1), and the other electrode is disposed apart from said pressure buffer chamber with a predetermined distance (L2),

the distance (L1) and (L2) satisfying the relationship of L1 ≠ L2.

67. (Previously Presented) The ink-jet recording head as set forth in claim 65, wherein one of said electrodes is disposed apart from said ink pressure chamber with a predetermined distance (L1), and the other electrode is disposed apart from said pressure buffer chamber with a predetermined distance (L2),

the distance (L1) and (L2) satisfying the relationship of L1 > L2.

F.3 cont'd

68. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein at least one electrode is further interposed between said two electrodes.

69. (Previously Presented) The ink-jet recording head as set forth in claim 62, wherein said electrode disposed at the surface exposed to said ink pressure chamber is grounded.

70. (Currently Amended) The ink-jet recording head as set forth in claim [[64]] 3, wherein said electrode disposed at the surface exposed to said ink pressure chamber is grounded.

71. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein a portion at which said electrodes disposed at said partition wall face each other is included in a portion at which said ink pressure chamber and said pressure buffer chamber face each other.

72. (Previously Presented) The ink-jet recording head as set forth in claim 71, wherein a length of one of said electrodes in a direction perpendicular to the thickness direction is different from a length of the other electrode adjacent to said one electrode in the same direction.

73. (Previously Presented) The ink-jet recording head as set forth in claim 72, wherein one of said electrodes is included in a portion at which said ink pressure chamber and said pressure buffer chamber face each other, and the other electrode adjacent to said one electrode divides the portion at which said ink pressure chamber and said pressure buffer chamber face each other.

74. (Previously Presented) The ink-jet recording head as set forth in claim 73, wherein said adjacent dividing electrode is thicker than said one electrode.

75. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein a length of said ink pressure chamber in a direction perpendicular to the thickness direction is different from a length of said pressure buffer chamber in the same direction.

76. (Previously Presented) The ink-jet recording head as set forth in claim 3, wherein a distance between said nozzles is constant in the thickness direction.

77. (Previously Presented) The ink-jet recording head as set forth in claim 45, wherein m nozzle alignments, in which said nozzles communicating with said ink pressure chambers are aligned in an arbitrary number in the same direction as the moving direction of said ink-jet recording head in an ink-jet printer, are arranged in a direction perpendicular to the moving direction,

said nozzles are aligned without any overlapping in the direction perpendicular to the moving direction, and $X = P/m$

wherein X represents a deviation between said nozzles nearest each other out of said nozzles in reference to the moving direction, m represents an integer number of nozzles, and P represents a distance between said nozzles belonging to said same nozzle alignment.

78. (Previously Presented) The ink-jet recording head as set forth in claim 77, wherein the distance between said adjacent nozzle alignments in the direction perpendicular to the moving direction is a multiple of X.

79. (Previously Presented) The ink-jet recording head as set forth in claim 77, wherein the moving direction accords with the arranging direction of said ink pressure chamber and said pressure buffer chamber.

80. (Previously Presented) The ink-jet recording head as set forth in claim 77, wherein the moving direction does not accord with the arranging direction of said ink pressure chamber and said pressure buffer chamber.

81. (Currently Amended) An ink-jet recording head comprising at least one piezoelectric block having (a) first and second ink pressure chambers, each pressure chamber communicating with a nozzle for ejecting ink supplied from an ink supply, (b) first and second partition walls, each partition wall serving as a driving portion for one of the two ink pressure

chambers, each partition wall including a piezoelectric element and at least two electrodes for driving said piezoelectric element, (c) a pressure buffer chamber, and (d) first and second fixed walls,

wherein at least one of said electrodes is embedded in said partition wall for controlling, by bending of the embedded electrode, whether said partition wall bends toward a side of said ink pressure chamber, or bends toward a side of said pressure buffer chamber,

the first ink pressure chamber, the first partition wall, said pressure buffer chamber, the second partition wall and the second ink pressure chamber are arranged in sequence along a thickness direction of said piezoelectric block,

said first fixed wall disposed adjacent to said first ink pressure chamber and said second fixed wall disposed adjacent to said second ink pressure chamber, ~~and~~

surfaces of the two electrodes are oriented perpendicular to the thickness direction, the driving portion is polarized in the thickness direction and perpendicular to the surfaces of the electrodes~~.~~, and

each of said first and second fixed walls is more difficult to bend compared with each of said first and second partition walls.

82. (Previously Presented) The inkjet recording head of claim 81, wherein the piezoelectric block is an integrally sintered one piece block structure.